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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,785	10/27/2003	Nathan J. Lee	PU2180	2784

23454 7590 06/01/2005

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EXAMINER

HSU, RYAN

ART UNIT PAPER NUMBER

3713

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

JP

Office Action Summary	Application No. 10/605,785	Applicant(s) LEE ET AL.	
	Examiner Ryan Hsu	Art Unit 3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/08/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 19, 21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (USPN 3,792,863) in view of Allen (USPN 4,940,236).

Claims 17 and 21 are anticipated by Evans' disclosure of a swing measurement system and multi-swing display that comprises of: a diagnostic golf club comprising a club head [14], a shaft attached to the club head (*see FIG 1*), a plurality of strain gauges attached to the shaft [22,24,26], where the strain gauges are used to measure data related to the golf club during a golf swing (*see col. 1: ln 58-col. 2: ln 8*). Furthermore, Evans' invention transmits the respective outputs of the sensors to a nearby "console" (ie: a computer) located in a separate space for processing the data received and stored in a memory device (*see col. 2: ln 9-24*). Evans' also discloses an interface mechanism that is coupled to the diagnostic golf club for providing communication between the diagnostic golf club and the computer (ie: the FM transmitter (golf club) and receiver (in the console) (*see FIGS. 1[elements 30, 22,24,26], col. 2 : ln 32-45*). Finally, Evans' invention allows for the internal memory device on the console to store data for multiple swings of the diagnostic golf club and then the data is uploaded to the console via the

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interface mechanism (ie: transmitted from the golf club to the console) (*see FIGS. 1-2[element 52], col. 2: ln 46-56, col. 3: ln 12-19*).

However, Evans lacks in disclosing the use of an internal memory device located in the golf club. Allen teaches in an analogous golf club the use of a distance computer built entirely into a golf club without significantly altering the swing-weight, total weight, feel, or durability of the club. Within Allen's club, an integrated circuit board having an internal memory is mounted in the shaft parallel to the shaft access (*see FIGS. 12-15, col. 4: ln 10-15, col. 8: ln 1-17*).

Therefore it would have been obvious to one of ordinary skill in the art, at the time of the applicant's invention to combine Allen's golf computer with Evans' system in order to create a computer aided diagnostics system incorporated into a golf club without significantly changing the swing-weight and total experience for the player.

In regard to claims 19 and 23, Evans discloses a device that allows for a golf club to transmit respective outputs of sensors to a nearby console for use of analyzing a golf swing. The use of the device with a golf club is inherent in the art to include the various embodiments of a golf club such as a driver, a fairway wood, an iron, or putter (*see FIGS. 1, col. 2: ln 58-68*).

In regard to claim 24, Evans discloses a diagnostic golf club that includes a battery positioned within the shaft (*see FIG. 1[element 28], col. 2: ln 9-31*).

Claim 18 and 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans and Allen as applied to claims above, and further in view of Bouton (USPN 5,472,205).

In regards to claims 18 and 20, Evans and Allen discloses a diagnostic golf club that includes an internal memory device, a power control circuit, a signal conditioning circuit for the plurality of strain gauges and a communication circuit (*see FIG. 1, col. 1: ln 58-col. 2: ln 9*). As taught by Allen, circuit board may be fashioned on the surface of a club or within any space where it may fit such as the hollow interior of the shaft (*see FIGS. 12-13*). Additionally, Evans shows in FIG. 1 a schematic of the circuitry that exists in the invention and that its real world application would involve a circuit board designed to enable the features described above. Although, Evans in view of Allen does disclose a communication circuit it lacks in disclosing a serial communication embodiment as a means for communicating between the processing console and golf club.

Bouton discloses an analogous video golf system that responds to a user swinging a golf club and a sensing system in order to give feedback to the user. In the Bouton's invention, he teaches the use of a microcontroller and a serial port transmitter to send information to a computer (*see col. 2: ln 31-48*). Bouton teaches that it is possible to send information to a variation of ways one of which is a serial data transmitter (*see col. 5: ln 29-54*). Therefore one would be motivated to modify Evans invention to include a serial interface as a means for transmitting the diagnostic information as an obvious alternative for design choice. It would thereby be obvious to one of ordinary skill at the time of the invention to combine the teachings of Bouton with Evans in order to create a golf diagnostic device using a serial interface communication device to communicate between the golf club and processing console.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans and Allen as applied to claims above, and further in view of Weber et al. (USPN 5,792,000).

Evans in view of Allen, discloses a golf diagnostic tool that uses a plurality of strain gauges, which are split into three sets one for measuring velocity, another for torque and finally flex (*see abstract, col. 1: ln 58-col. 2: ln 9*). It is taught by Evans that it is necessary to implement these three elements in order to sense the motion and movement of the golf club so that the console may process and visually display the measured swing. However Evans lacks in disclosing using nine strain gauges for the different sets of sensors.

Weber et al. discloses an analogous golf swing analysis method and apparatus where were a plurality of strain gauges are used in order to produce information to diagnose and improve a golfer's swing (*see FIGS. 1, abstract*). Weber also implements the use of a circuit device that uses sensors to produce the measurements using sets of 4 sensors placed around the shaft of the club. However, Weber also teaches that although the illustrated embodiment shows four sensors it will be understood that more or fewer sensors could be used. Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Weber with the invention disclosed by Evans to create sets of nine strain gauges to create a golf diagnostic system (*see col. 5: ln 43-55*).

Response to Remarks

Examiner has approved the preliminary amendment of canceling claims 1-16 and the amendments to the specification as requested by the applicant.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brostedt et al. (USPN 5,984,684) – Golf diagnostic device that teaches physical skill through club and video camera system.

Harlan et al. (USPN 5,154,427) – Golf Swing Analysis device that tracks real time movement of a golf club head.

Any inquiry concerning this communication or earlier communication from the examiner should be direct to Ryan Hsu whose telephone number is (571)-272-7148. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan M Thai can be reached at (571)-272-7147.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, contact the Electronic Business Center (EBC) at 1-866-217-9197 (toll-free).



RH

May 15, 2005



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TC3760